

1/22

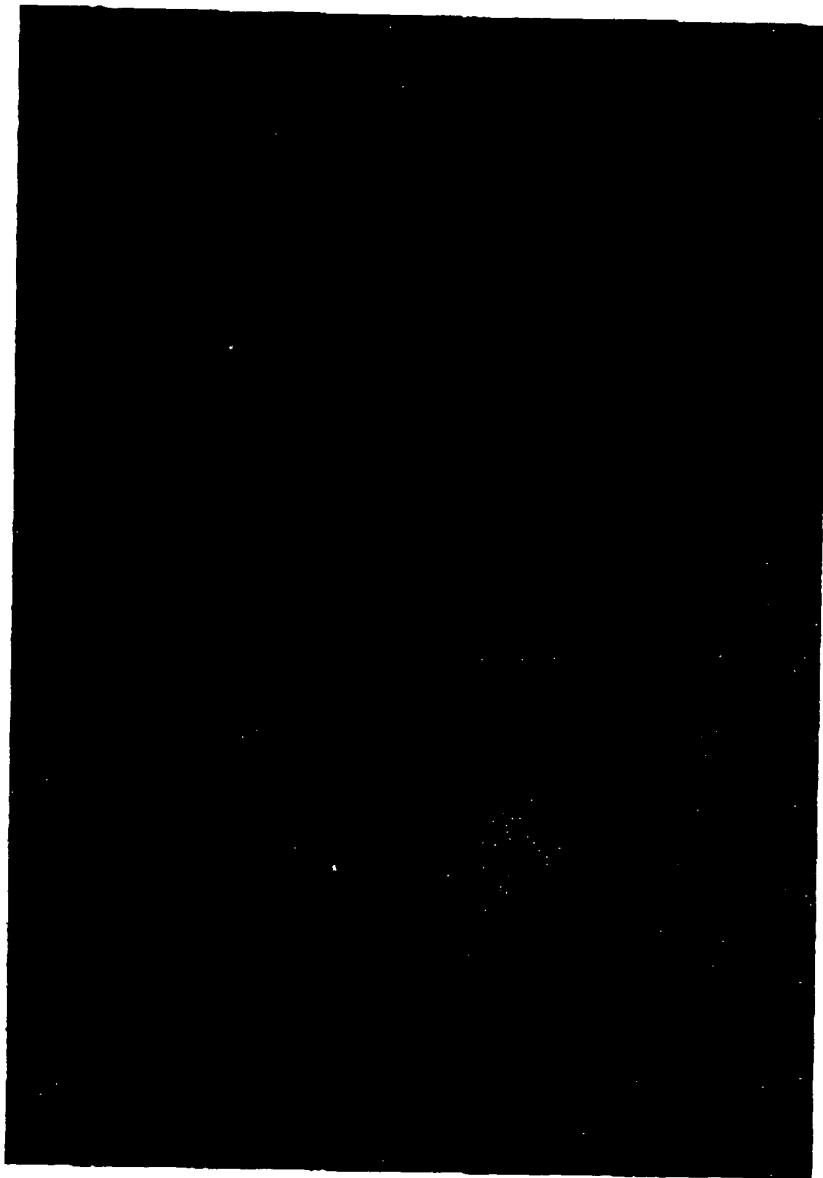


Fig. 1

Fig. 2a

Fig. 2b

HS-HMC-DIS3	183	AIQEGIPAPTC	EEVVKTLT	----	ANPELIDRLACL	SEEGNEIES	----	GKIIFSEHLPLSKL
MM-hmc-DIS3	183	AVQEGIPAPTC	EEVVKSLT	----	ANPELIDRLAYL	SDEMNEIES	----	GKIIFSEHLPLSKL
CE-Q17632-DIS3	191	HYQH	----	VMYLKEYIQNL	EDP	----	GKQALLDQMA	AYESSGNGNE
SP-P37202-DIS3	199	AAEQGIQVSTL	KDVQYLP	----	DSEILLDMVSAI	ADAIASKEQVES	----	GTKNVVELHWSMSRL
SC-Q08162-DIS3	207	EVESNII	TKSLVQYIELLP	----	NADDIRDSIP	-QMSDFDKDLERDT	----	FSDFTFPEYSTARU
MM-LOBO	107	GDLVVVVKLL	PEDQKAVKP	----	E	----	SNDKEI	EATYEADIPE
HS-LOBO	0	----	----	----	----	----	----	----
CE-Q09568-LOBO	92	GDVVAVKIKP	KEDMLVNVV	----	E	----	YVKWMAEH	----
SP-Z99259	143	NSAK	----	REKNNSHQVEADT	----	NN	----	ATEVSSNAKKS
SC-P24276-SSD1	280	PQOQLSPFRH	RGNSRDNYSFNT	LEPPAL	FQOGHKHRA	SNSSVHSF	SSQNNNGGRK	SLFAPYLPQANI
SC-P39112	206	NRVLLRIP	HKLPAGIHSLI	----	QPESHKHLP	IGTVKNF	SNQTN	----
		----	----	----	----	----	----	----
	281	291	301	311	321	331	341	
HS-HMC-DIS3	237	QQGIKSGTYL	QGTFRASREN	YLEATV	WIHGDNE	ENKETI	LQGLKHLNRA	VHEDIVAVELLPKS-QMVAPS
MM-hmc-DIS3	237	QQGIKSGSYL	QGTFRASREN	YLEATV	WIHGDKEE	KEETILT	QGTIKHLNRA	VHEDIVAVELLPRS-QMVAPS
CE-Q17632-DIS3	242	MEGIASGTIK	RGNFSVSR	ENYREATVI	ID	----	DQLTSMFITG	----
SP-P37202-DIS3	257	LACIKNGEVH	KGLINISTYN	YLEGSVVVP	----	GYNKPV	LVSGRENLNRA	VQGDIVCICQILPQD-QWKTEA
SC-Q08162-DIS3	264	MGLKNGVL	YQGNIQISEY	NPLEG	SVSLP	----	RFSKPVLIV	QOKNLNRAFNGDQVTVELLPQS-EWKAPS

Fig. 2c

Fig. 2d

Fig. 2e

Fig. 2f

8/22

HS-HMC-Dis3	522	-----SARRGTTVYLCEKRIDMVPEILLSS--NLCSLKCDVDRLAFSCIWEMNHNA-----EILK
NM-hmc-Dis3	522	-----SARRGTTVYLCEKRIDMVPEILLSS--NLCSLRSNVDRLAFSCIWEMNHNA-----EILK
CE-Q17632-Dis3	534	-----AALRGTTVYLCDDRIDMLPCLLSS--NLCSLRGGEERYAFSCIWTWTSSA-----DIQS
SP-P37202-Dis3	551	-----AASRGTTVYLVDKRIDMLPMLLGT--DLCSLRPYVERFAFSCIWEMDENA-----NLIK
SC-Q08162-Dis3	586	-----GAARGTSVYLVDKRIDMLPMLLGT--DLCSLKPYVDRFAFSCIWELDDSA-----NIVN
NM-LOBO	424	-----AAERATSVYLVQKVVPMLPRLLCE--ELCSLNPMTDKLTFSVIWKLTPEG-----KILE
HS-LOBO	51	-----AAERATSVYLVQKVVPMLPRLLCE--ELCSLNPMSDKLTFSVIWTLTPEG-----KILD

Fig. 2g

9/22

CE-Q09568-LOBO	363	-----ASERGNSTYLSQTVIPMLPRILCE--QLCSLNPVGVDRLSFSTVFKMSYEA-----ELYD	771	781	791	801	811	821	831
SP-Z99259	496	-----AASRATTVYLVQKALPMLPPLLCE--RLCSLNPVNVERLAFSVFWKLDNSNGK-----EIGK							
SC-P24276-SSD1	746	-----ARKRSSAVFMPQKLVNLLPQSFN---DELSLAPGKESATLSVVYTLDSSTL-----RIKS							
SC-P39112	578	GISTDIILNVALKRSFTTYLPDVTVPMLPQSIChLSDLGKQGQRTKTSFSVDVKITSKCSGKSIIEIMVDS							
		----- ----- ----- ----- -----							
HS-HMC-Dis3	574	TKFTKSVINSKASL-YAEAQLRIDSANMND-----DITTSIRGLNKLAKILKKRRIENGA							
MM-hmc-Dis3	574	TRFTKSVINSKASL-YAEAQMRIDSAAMND-----DITTSIRGLNQLAKILKKGRIEKGA							
CE-Q17632-Dis3	586	VKYHKSLIKSKAALTYEKAQEIIDDPKEQN-----DVALGLRGLMKLSKVLNARRTCNGA							
SP-P37202-Dis3	603	VHFTKSVIASKEAFSYADAQARIDDKQMDD-----PLTQGMRVLLKLSKILKQKRMDEGA							
SC-Q08162-Dis3	638	VNFMKSVIRSREAFSYEQAQLRIDDKTQND-----ELTMGMRAALLKLSVKLKQKRLEAGA							
MM-LOBO	476	EWFGRTIIRSC TKLSYDHAQSMIENPTEKIPEEELPPI SPEHSVEEVHQA VLNHLHSIAKQLRRQRFDGA							
HS-LOBO	103	EWFGRTIIRSC TKLSYDHAQSMIENPTEKIPEEELPPI SPEHSVEEVHQA VLNHLHSIAKQLRRQRFDGA							
CE-Q09568-LOBO	415	VWFGRSVIRSRVKLAYEHAQDFIENPEKDFTCDEL PDISDGNTPFEIKEKTLMLHRIAQVLRQKREDSGA							
SP-Z99259	549	RWFGKTVIKTCARLAYSEAQGVIEGKSWDDAVG--KPIGGTTPKDVETSILTCEISRKLKDRFAKGA							
SC-P24276-SSD1	798	TWVGESTISPSNILLSLEQLDEKLSGSPS-----YLSTVQEIARSFYARRINDPE							
SC-P39112	648	PKIRKGI VSNFPKATYEDVDRI LGTPNSEAS-----PVKKDLESLSMI SKLLREQRIKNSN							
		----- ----- ----- ----- -----							
		841	851	861	871	881	891	901	

Fig. 2h

10/22

HS-HMC-Dis3	628	LTLSSPEVRFTMDSETHDPIDLOTKELRETNMSVEEFMLLANISVAKKIHIEEFSEHALLRKHPPPPSNY	911	921	931	941	951	961	971
MM-hmc-Dis3	628	LTLSSPEIRPHMDSETHDPIDLOTKELRETNMSVEEFMLLANISVAKKIHIEEFSEHALLRKHPPPPSNY							
CE-Q17632-Dis3	641	LTLASSEVRFTMDWESRTPKKVMEKQHLDTSHMSVEEFMLLANISVAKKILIEYDPCALLRRHPVPLKESY							
SP-P37202-Dis3	658	LNLASPEVRIFTDNETSDDPMDEIKQLLETNLSVEEFMLLANISVAKKIYDAFPQTAVLRRHAAAPPLTNF							
SC-Q08162-Dis3	693	LNLASPEVKVHMDSETSDNEVEIKLLATNSLVEEFMLLANISVARKIYDAFPQTAMLRHAAAPPSNPF							
MM-LOBO	546	LRLDQLKLAFTLDHETGLPOGCHIEYRDSNKLVBEEFMLLANMAVAHKIFRTFPEQALLRRHPPPPQTKML							
HS-LOBO	173	LRLDQLKLAFTLDHETGLPOGCHIEYRESNKLVEEFMLLANMAVAHKIHRAPPEQALLRRHPPPPQTKML							
CE-Q09568-LOBO	485	LRIELPRILKFALEDK-KPQGVSYIEIKDSNKLVEEFMLLANMEVAKKIAENFPEHALLRNHPPPPKCKMI							
SP-Z99259	617	VEINSTEIKFQLDHYG-MPNKCEVYEOTDANHLIEEFMLLANRSVAEHSKNFSNNLSLRRHASPKEKQI							
SC-P24276-SSD1	849	ATLLPTLSLESDDKVKVDINILDRTLGVVINEIKRKVNSTVAEKIYTKLGDALLRRQMOPQIATKM							
SC-P39112	704	AVIFGEGFNKGLVMLN---ADSEGELTEVTFTSDQEEETLSILVSEMMILANTLTGRYPHEN---KI							
		----- ----- ----- ----- ----- ----- ----- ----- ----- -----							
		911	921	931	941	951	961	971	
HS-HMC-Dis3	698	EILVKAARS-RNLGEIKTDTAKSLAESLDQAESPTFPYLN--TLRLILATRCMMQAVYFCSGMD-----							
MM-hmc-Dis3	698	DILVKAARS-KNLQIKTDTAKSLADSLDRAESPOFPYLN--TLRLILATRCMMQAVYFCSGMD-----							
CE-Q17632-Dis3	711	KPLVEAARH-RGFEIIVESGKGLADSLNRCVDKKNPMLN--RLRLMLTTRCMTQAVYFSAGKDGFSDIKL							
SP-P37202-Dis3	728	DSLQDILRVCKGMHLKCDTSKSLAKSLDECVDKPEYFN--TLRLILTTRCMLSAEYFCSGTFAP-----							
SC-Q08162-Dis3	763	EILNEMLNTRKNMSISLESKALADSLDRCDVPEDPYFN--TLVRIMSTRCMMAAQYFYSGAYS-----							
MM-LOBO	616	SDLVEFCQ-MGLPMDVSSAGALNKSLTKTFGDDKYSLARKEVLTNMYSRPMQMALYFCSGMLQD-----							
HS-LOBO	243	SDLVEFCQ-MGLPMDVSSAGALNKSLTKTFGDDKYSLARKEVLTNMYSRPMQMALYFCSGMLQD-----							
CE-Q09568-LOBO	554	KOVAEQCAR-IGPPLDGRTSGLLSTSLRKYQKSRDMLCIRQVISLTIKPMQAKYFCT--FEM-----							
SP-Z99259	686	NEFCHFLKS-MNFDFDASSAFAFNASMVRILRSTFNEELN--ELPENMAVRSLNRAEYFCTGDFGEK-----							
SC-P24276-SSD1	919	ASFRKKION-FGYNFDNTADELIKGVLIKDDDVRCVGI-----EILFKTWPRLRYFIAGKVD-----							
SC-P39112	764	GGVFRCKYQ---LPLGEVAQQYQSDMITSTTKGIFPKLK-----DIVKLSLLNSSFYTGPRFR-----							
		----- ----- ----- ----- ----- ----- ----- ----- ----- -----							
		981	991	1001	1011	1021	1031	1041	

Fig. 2i

Fig. 2j

[illegible]

12/22

HS-HMC-Dis3	835	QLFFKSKG	IVSEEAYILFVRKNAIVVLIPKYGLEGTVFFFEKDKPNQLI
MM-hmc-Dis3	835	QLFFKSKG	IVSEEAYILFVRKNAIVVLIPKYGLEGTVFFFEKDKPKPRLA
CE-Q17632-Dis3	918	VRFFKGG	VETCEGFVNGVRNNGIQVFPKYGLESIIVLQTSAAAG--TT
SP-P37202-Dis3	868	GQALKGG	VAEDAYVIVKVFNGFVFIARFGLEGIVVYTKSLSSVLEPN
SC-Q08162-Dis3	903	GQVMRNN	ESTETGYVIVKVFNNNGIIVLVPKFGVEGLIRLDNLT--EDPNS
MM-LOBO	756	AVLVKESG	PLESEAMVNGVILNQAFDVLVLRFGVQKRIYCNALALRSYSPQ
HS-LOBO	383	AVLVKESG	PLESEAMVNGILKQAFDVLVLRFGVQKRIYCNALALRSHPQ
CE-Q09568-LOBO	693	GVFIHQTG	PMKQAVVLGVMDLSFDVLIVEYGVKRVVVDKMKR--DFN

Fig. 2k

13/22

SP-Z99259	823	SVYIAEYCKKHKKMPVQAFATRISGNSIDVYISEYGISNRVDLSSDDR-IKSPI	1191	1201	1211	1221	1231	1241	1251
SC-P24276-SSD1	1052	CKTINDMGNTTG--QLLTMATVLQVYESSFDVFIPEFGIEKRVHGDQLPLIKAEDGTNRVLELHMQPGV							
SC-P39112	890	LNLYLKKL-----TKLEPERTFDVMT-----SVPQNGFTGCVFPDLSPFARGTLK-----							
			1191	1201	1211	1221	1231	1241	1251
HS-HMC-Dis3	885	-----YDDEIPSLKIED-TVFHVFDKVKVKIMLDSSNLQHOKIRMSIIVEPQIPGIS							
MM-hmc-Dis3	885	-----YDDEIPSLRIEG-TVFHVFDKVKVKITLDSSNLQHOKIRMALVEPQIPGIN							
CE-Q17632-Dis3	965	-----IDVEEMSVKVGDVVKELEPVTVRISVNEKNQQRPRVELQLIKPAIPGLS							
SP-P37202-Dis3	916	-----VEYVEDEYKINI--EIRDQPKPQT---VQIQMFQQVRVRVITVRDEHSGKQ							
SC-Q08162-Dis3	950	-----AAFDEVEYKLT--VPTNSDKPR-----DVVFDKVEVQVRSVMDPITSKR							
MM-LOBO	806	-----KVGKKPELTLVWEPD-DLE---EPTQQVITIPSLVDVVLQAEATALKYSA							
HS-LOBO	433	-----KVGKKPELTLVWEPE-DME---QEPAQVITIPSLVEVVLQAEATALKYSA							
CE-Q09568-LOBO	740	-----KSTEX--LTIYWPADPNAESGNREEFSSSIQMCNVVYVIL-VPYKSI EVSA							
SP-Z99259	878	-----VAPDDSSVKITL---PDDS---Q-K---TIALTDRFQVYLYSDYSRTFFSI							
SC-P24276-SSD1	1120	DSATFIPADEKNPKSYRNSIKNKFRTAAEIANIELDKRAESEPLISDPLSKELSDHLTVPNLRPSAS							
SC-P39112	934	-----LHPSSMHYPMIG-----DIVKNCKISKIDCLEGMLELEKL--							
			1261	1271	1281	1291	1301	1311	1321

Fig. 21

14/22

HS-HMC-DiS3	935	IPTDT'S	NMDLNGPKKKMKLGK	
MM-hmc-DiS3	935	IPPVNA	DKALTAPGGKKRLEK	
CE-Q17632-DiS3	1016	V	DFDLSSEG	IGL
SP-P37202-DiS3	962	K	V	QITLVY
SC-Q08162-DiS3	994	K	A	ELLLK
MM-LOBO	853	ILKRP	LEKASDEEPED	
HS-LOBO	480	ILKRPQTQHLGPEKEEESDGEPEDSSTS		
CE-Q09568-LOBO	788	TIVRPS	LEQRNLIKSTLKD MKETGSTILQ	
SP-Z99259	919	R	CSLVSLN	
SC-P24276-SSD1	1190	DNKQNALEKFISTTETRIENDNYIQEIHELOKIPILRAEVGMALPCLTVRALNPFMKRV		
		1331	1341	1351
				1361
				1371
				1381

Fig. 2m

15/22

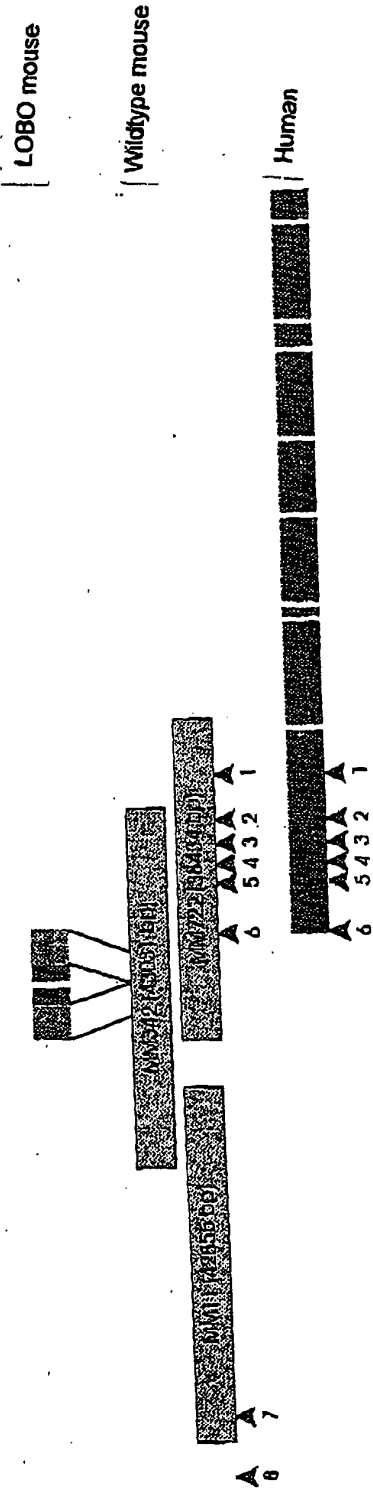


Fig. 3

WT LOBO

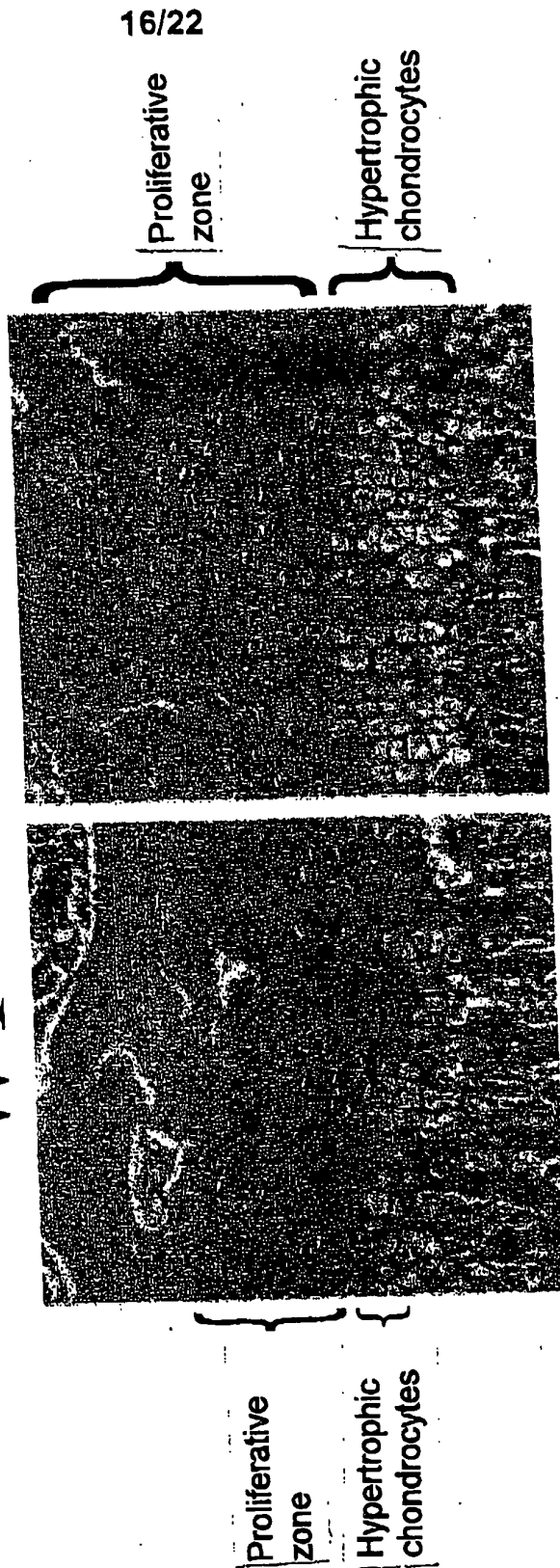


Fig. 4

17/22

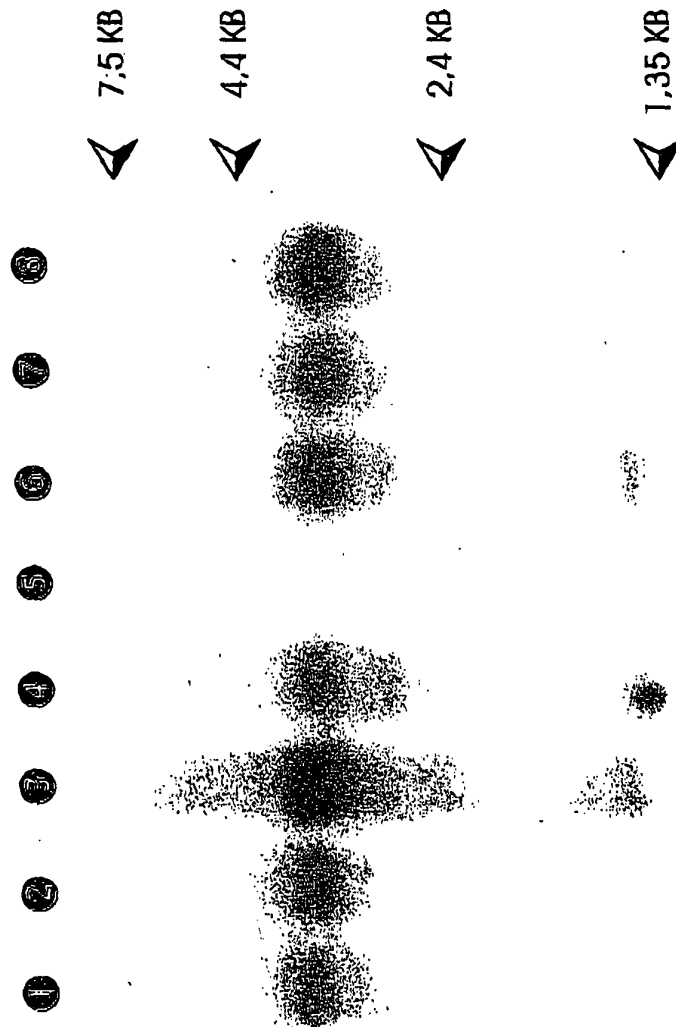


Fig. 5

18/22

Dis3 Proteins

VACB / RNase II

LOBO

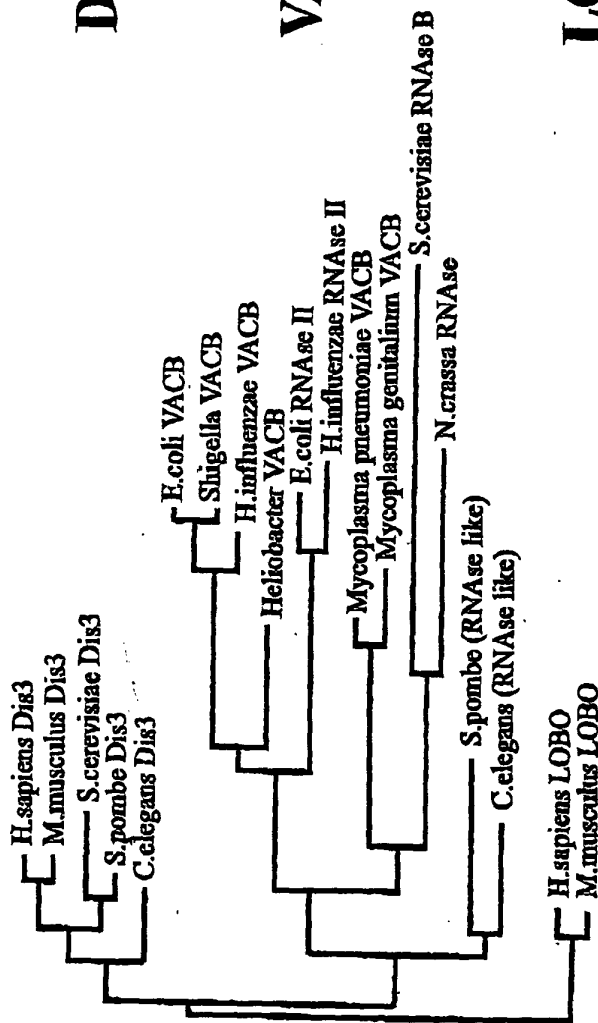
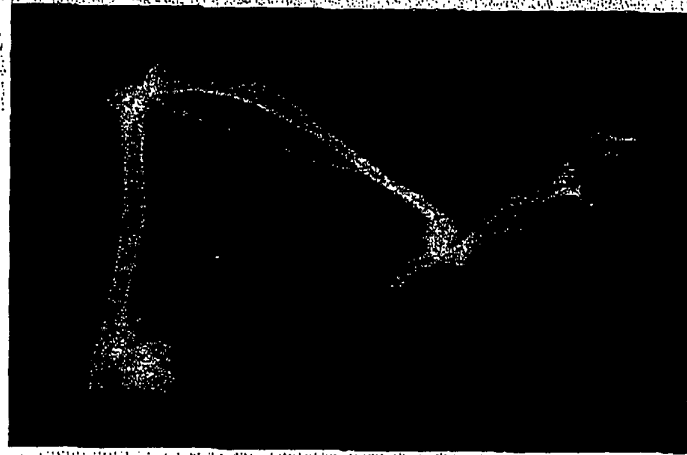


Fig. 6

LOBO



WT

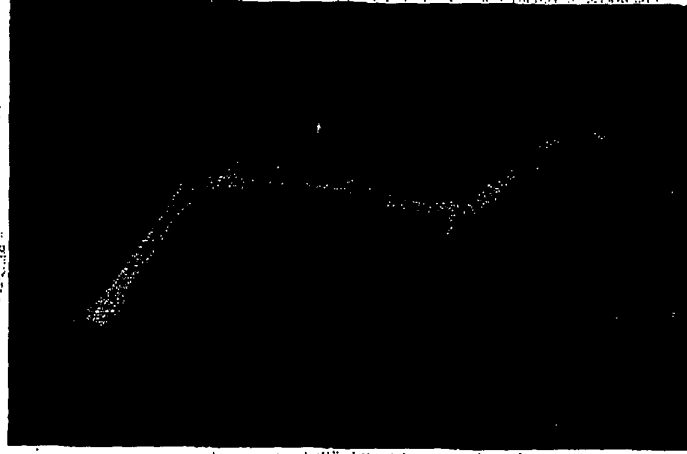


Fig. 7

20/22

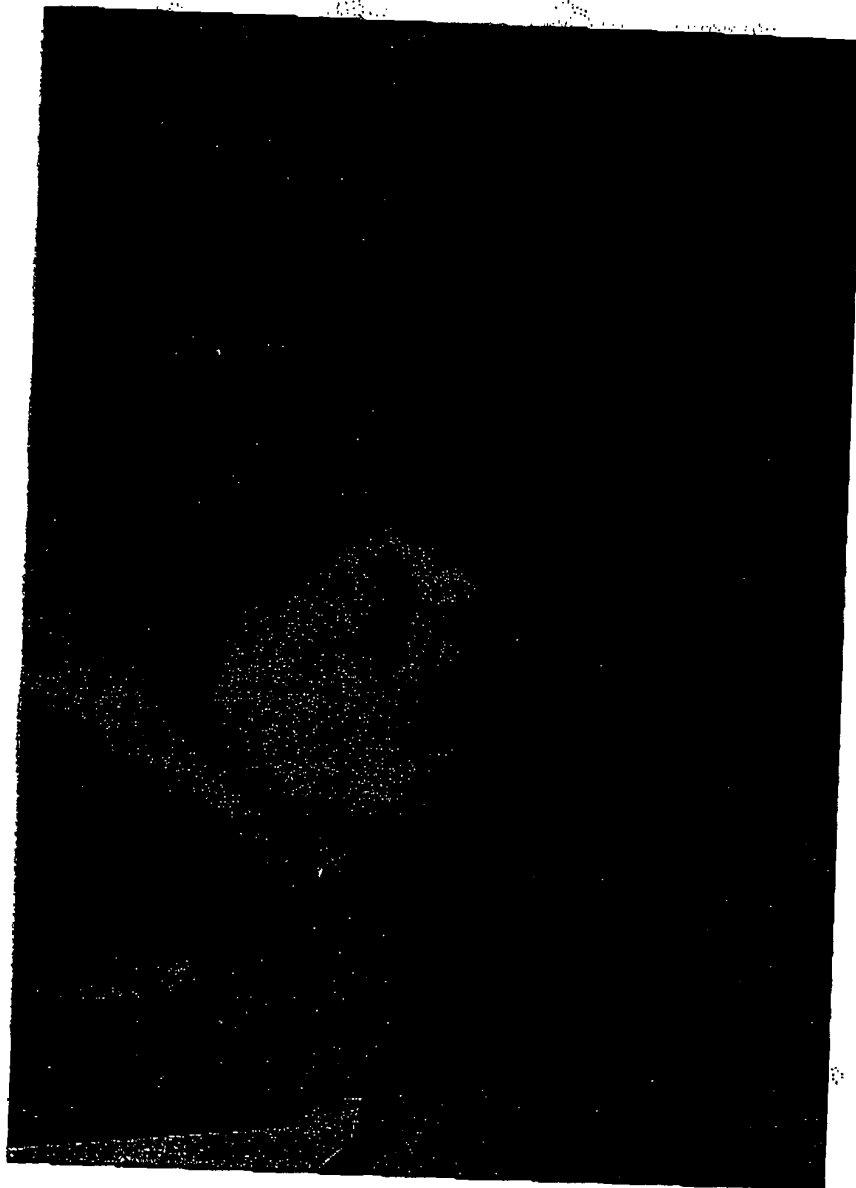


Fig. 8

21/22

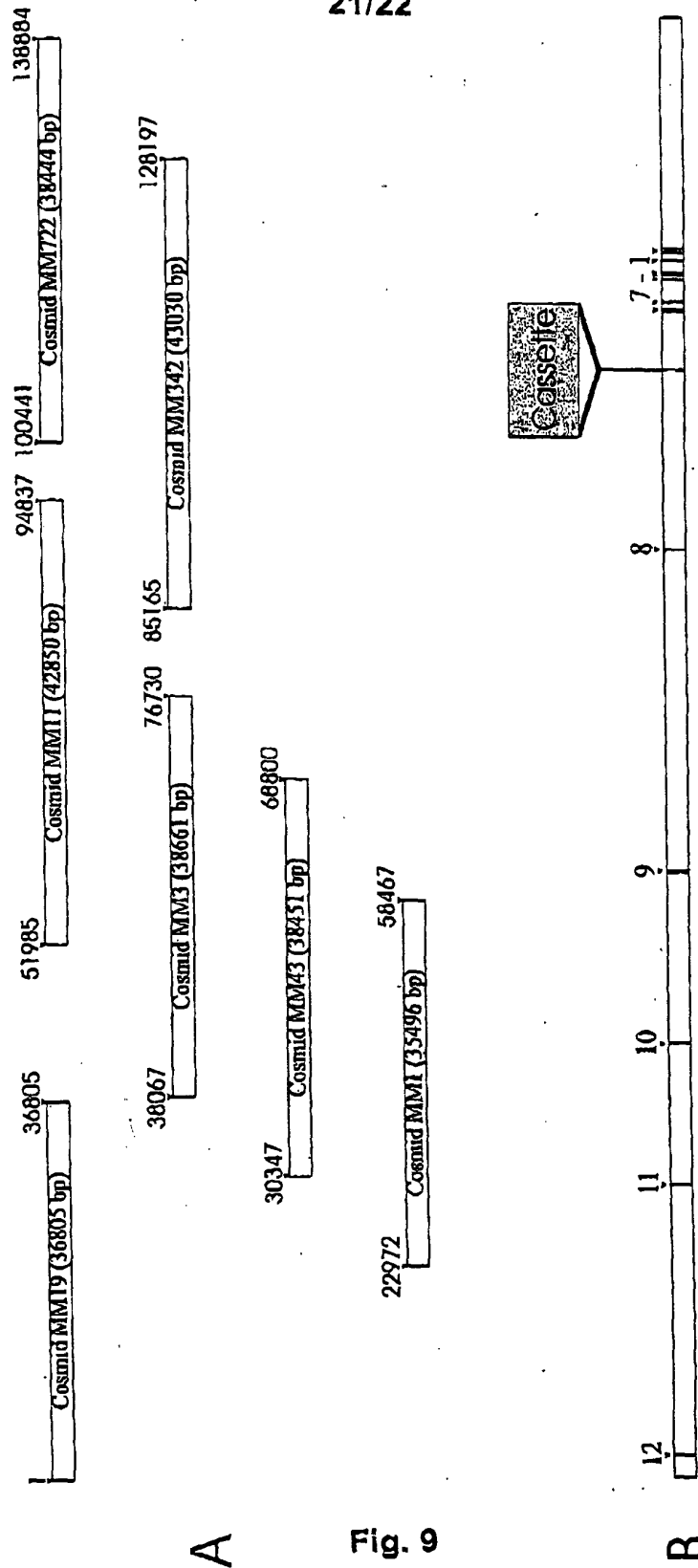


Fig. 9

22/22

STS Marker
WI-8964

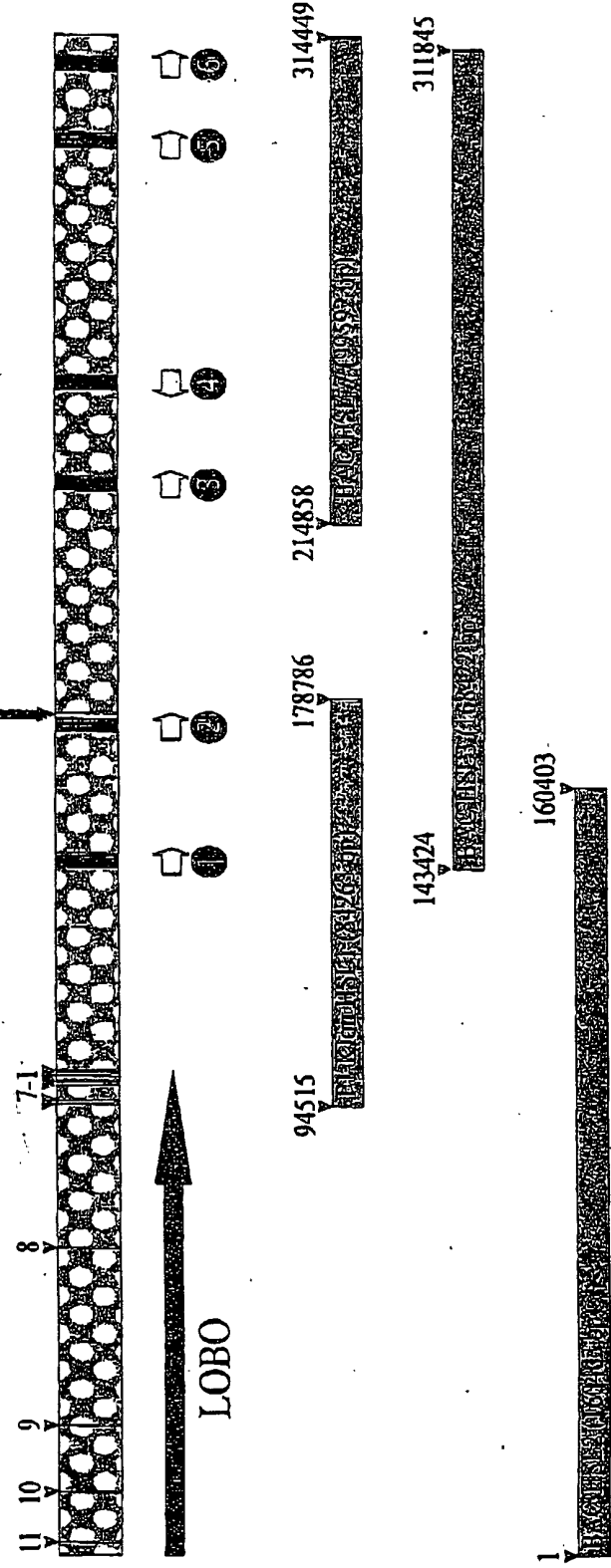


Fig. 10